

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

October 28, 1999

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555

Serial No. 99-549  
NL&OS/GSS/ETS R0  
Docket Nos. 50-338/339  
License Nos. NPF-4/7

Gentlemen:

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**NORTH ANNA POWER STATION UNITS 1 AND 2**  
**TECHNICAL SPECIFICATION CHANGE, RELOCATION OF**  
**WASTE GAS CHARCOAL FILTER SYSTEM TO TRM**

Pursuant to 10 CFR 50.90, Virginia Electric and Power Company requests amendments, in the form of changes to the Technical Specifications and to Facility Operating License Numbers NPF-4 and NPF-7 for North Anna Power Station Units 1 and 2, respectively. The proposed changes will remove the operability and surveillance requirements of Technical Specifications Section 3/4.6.4.3, "Waste Gas Charcoal Filter System" from the Technical Specifications and relocate them to the Technical Requirements Manual. A discussion of the proposed Technical Specifications changes is provided in Attachment 1.

The proposed Technical Specifications changes have been reviewed and approved by the Station Nuclear Safety and Operating Committee and the Management Safety Review Committee. It has been determined that the proposed Technical Specifications changes do not involve an unreviewed safety question as defined in 10 CFR 50.59 or a significant hazards consideration as defined in 10 CFR 50.92. The proposed Technical Specifications changes are provided as a mark-up in Attachment 2 and a typed version in Attachment 3. The basis for our determination that the changes do not involve a significant hazards consideration is provided in Attachment 4.

There are no new commitments made in this letter. If you have any further questions, please contact us.

Very truly yours,



D. A. Christian  
Vice President – Nuclear Operations

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Attachments:

Attachment 1	Discussion of Changes
Attachment 2	Mark-up of Technical Specifications Changes
Attachment 3	Proposed Technical Specifications Changes
Attachment 4	Significant Hazards Consideration Determination

cc: U.S. Nuclear Regulatory Commission  
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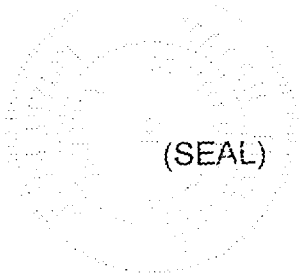
COMMONWEALTH OF VIRGINIA    )  
  )  
COUNTY OF HENRICO             )

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by David A. Christian, who is Vice President - Nuclear Operations, of Virginia Electric and Power Company. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 28<sup>th</sup> day of October, 19 99.

My Commission Expires: 3/31/2000.

Maggie McAure  
Notary Public



**Attachment 1**

**Discussion of Changes**

**North Anna Power Station  
Units 1 and 2  
Virginia Electric and Power Company**

## **Discussion of Change**

### **Introduction**

Pursuant to 10 CFR 50.90, Virginia Electric and Power Company requests a change to Technical Specifications Section 3/4.6.4.3, "Waste Gas Charcoal Filter System." The proposed changes will remove the operability and surveillance requirements for the Waste Gas Charcoal Filter System from the Technical specifications and relocate these requirements in the Technical Requirements Manual (TRM).

A waste gas decay tank rupture is highly unlikely, as the waste gas decay tanks are designed and constructed to stringent quality control standards, are provided with pressure relief valves to prevent overpressurization, are missile-shielded by installation below grade, and have their gaseous contents controlled to prevent potentially explosive mixtures. In the unlikely event of a waste gas decay tank rupture, the entire gaseous content of the waste gas decay tank is assumed to be released to the atmosphere as a ground-level release. Although the Technical Specifications (TS 3.11.2.6) limit the content of each tank to less than or equal to 25,000 curies of noble gases, the total activity assumed to be released during a waste gas decay tank rupture is 73,000 Ci of Xe-133 equivalent and 0.084 Ci of I-131 equivalent. The waste gas charcoal filter system is not capable of filtration of the contents of a ruptured decay tank and is not credited for any mitigation of the release in the accident analysis. In addition, the releases associated with a waste gas decay tank rupture are bounded by the existing LOCA releases.

The proposed changes do not create an unreviewed safety question and are consistent with the Improved Technical Specification (NUREG-1431) which do not include operability and surveillance requirements for the waste gas charcoal filter system.

### **Licensing and Design Bases**

The gaseous waste disposal system is designed to maintain effluent radioactivity levels as low as practicable and below the limits of applicable regulations. The system is designed to conform with original AEC and present NRC general design criteria, and to meet the intent of 10 CFR 20, 10 CFR 50, and 10 CFR 100, so as not to endanger the health of station operating personnel or the general public.

### **Discussion**

The gaseous waste disposal system is common to both units and is sized to treat the radioactive gases released during simultaneous operation of both units. Fission product gases and uncondensed radioactive vapors are held for decay, filtered, and diluted with

ventilation air until they may be safely released. The gaseous waste disposal system is designed to provide adequate storage for radioactive decay time of the waste gases and, in addition, provide for holdup of these gases when adverse meteorological conditions make it desirable to discontinue release of waste gas to the environment.

After sufficient decay time and sampling, the gas is released into the process vent system at the suction of the process vent blowers. These blowers also take suction on the containment vacuum compressor discharge and on the vents of liquid waste tanks. These gases are mixed with filtered air from the auxiliary building and are drawn through charcoal and high-efficiency particulate air (HEPA) filters. The gases then pass through a regenerative heat exchanger and are discharged to the atmosphere.

In the event that the activity of the process vent stream exceeds the setting of the process vent radiation monitors, the release from the waste gas decay tanks and the containment vacuum pumps to the process vent are terminated automatically. The monitor also alarms in the main control room prior to valve closure if the activity approaches a preset value. The gaseous waste disposal system provides adequate radioactive decay storage time for the waste gases and long-term holdup of these gases when either high-flow letdown is required or adverse meteorological conditions make it desirable to discontinue release of waste gas to environment. Gases in these tanks are allowed to decay for 60 days before release, unless additional gas storage capacity is required by reactor shutdown or start-up activities.

Monitoring gaseous effluents in accordance with the Offsite Dose Calculation Manual (ODCM) ensures that the composite results of the variations in gaseous waste inputs and processing on the actual releases are within current licensing basis for the gaseous waste disposal system as specified in the acceptance criteria of the ODCM.

The Waste Gas Charcoal Filter System is used for control of release of radionuclides to the environment during normal plant operations and is not credited in the accident analysis for accident mitigation of any plant accident including a waste gas decay tank rupture. Therefore, the operability and surveillance requirements can be removed from the Technical Specifications.

#### Specific Changes Units 1 and 2

- Delete Index line: Item Waste Gas Charcoal Filter System
- Remove TS 3.6.4.3 operability requirements and the associated surveillance requirements, TS 4.6.4.3.

## Safety Significance

Virginia Electric and Power Company has reviewed the proposed Technical Specification changes and has determined that the proposed changes would not pose an unreviewed safety question. The proposed changes will remove the operability and surveillance requirements for the Waste Gas Charcoal Filter System from the Technical specifications and relocate these requirements in the Technical Requirements Manual (TRM). Specifically, operation of the North Anna Power Station in accordance with the proposed Technical Specification changes will not:

1. Involve an increase in the probability or consequences of an accident previously evaluated.

Relocating the operability and surveillance requirements for The Waste Gas Charcoal Filter System to the TRM does not change the operation of the plant. The plant and the radioactive waste gas system will not be operated differently. No new accident initiators are established as a result of the proposed changes. Therefore, the probability of occurrence is not increased for any accident previously evaluated.

Relocating the operability and surveillance requirements for The Waste Gas Charcoal Filter to the TRM does not effect the gaseous releases to the environment, which are controlled by the ODCM. Additionally, no credit for these filters is taken in the accident analysis for Waste Gas Decay Tank rupture. Therefore, there is no increase in the consequences of any accident previously analyzed,

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes do not affect the operation of the plant. The gaseous waste systems will not be operated differently as a result of the proposed changes. No new accident or event initiators are created by moving the operability and surveillance requirements for the Waste Gas Charcoal Filter to the TRM. Therefore, the proposed changes do not create the possibility of any accident or malfunction of a different type.

3. Involve a reduction in the margin of safety as defined in the bases on any Technical Specifications.

The proposed changes have no effect on any safety analyses assumptions. Credit for the waste gas charcoal filters is not taken in the accident analysis for a Waste Gas Decay Tank rupture. Therefore, the proposed changes do not result in a reduction in a margin of safety.